

## ABSTRACT OF THE DISCLOSURE

A heat exchanger stack includes two or more nestable plates formed of a plate material being substantially unresponsive to electromagnetic impulse welding, and wherein each plate includes a generally flat central portion having a plurality of protrusions protruding from one or more surfaces thereof and one or more pairs of edge portions generally formed non-coplanar relative to the generally flat central portion. The two or more plates are arranged in a nesting arrangement and spaced apart by the protrusions so as to define therebetween a space through which a heat exchange medium may flow. Further, two or more plates are affixed together by electromagnetic pulse welds at a plurality of welding locations which include the protrusions and one or more pairs of edge portions. Also, the two or more plates are mutually connected at the welding locations via a facilitator substrate, which is highly responsive to electromagnetic impulse welding, and which is disposed on one or more of the two plates.